

# BSH0553M12A2A

AC servo motor BSH - 0.9 Nm - 8000 rpm - key shaft - without brake - IP50

## Main

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| Product or component type | AC servo motors                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Component name            | BSH                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Continuous stall torque   | 1.3 N.m for LXM15LU60N4 at 400 V 3 phases<br>1.3 N.m for LXM15LU60N4 at 480 V 3 phases<br>1.3 N.m for LXM05AD10M2 at 200...240 V single phase<br>1.3 N.m for LXM05AD10M3X at 200...240 V 3 phases<br>1.3 N.m for LXM05BD10M2 at 200...240 V single phase<br>1.3 N.m for LXM05BD10M3X at 200...240 V 3 phases<br>1.3 N.m for LXM05CD10M2 at 200...240 V single phase<br>1.3 N.m for LXM05CD10M3X at 200...240 V 3 phases         |
| Peak stall torque         | 3.5 N.m for LXM15LU60N4 at 400 V 3 phases<br>3.5 N.m for LXM15LU60N4 at 480 V 3 phases<br>3.5 N.m for LXM05AD10M2 at 200...240 V single phase<br>3.5 N.m for LXM05AD10M3X at 200...240 V 3 phases<br>3.5 N.m for LXM05BD10M2 at 200...240 V single phase<br>3.5 N.m for LXM05BD10M3X at 200...240 V 3 phases<br>3.5 N.m for LXM05CD10M2 at 200...240 V single phase<br>3.5 N.m for LXM05CD10M3X at 200...240 V 3 phases         |
| Nominal output power      | 190 W for LXM05AD10M2 at 200...240 V single phase<br>190 W for LXM05AD10M3X at 200...240 V 3 phases<br>190 W for LXM05BD10M2 at 200...240 V single phase<br>190 W for LXM05BD10M3X at 200...240 V 3 phases<br>190 W for LXM05CD10M2 at 200...240 V single phase<br>190 W for LXM05CD10M3X at 200...240 V 3 phases<br>460 W for LXM15LU60N4 at 400 V 3 phases<br>524 W for LXM15LU60N4 at 480 V 3 phases                         |
| Nominal speed             | 1500 rpm for LXM05AD10M2 at 200...240 V single phase<br>1500 rpm for LXM05AD10M3X at 200...240 V 3 phases<br>1500 rpm for LXM05BD10M2 at 200...240 V single phase<br>1500 rpm for LXM05BD10M3X at 200...240 V 3 phases<br>1500 rpm for LXM05CD10M2 at 200...240 V single phase<br>1500 rpm for LXM05CD10M3X at 200...240 V 3 phases<br>4000 rpm for LXM15LU60N4 at 400 V 3 phases<br>5000 rpm for LXM15LU60N4 at 480 V 3 phases |
| Maximum mechanical speed  | 8000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| Product compatibility       | LXM05AD10M2 at 200...240 V single phase<br>LXM05AD10M3X at 200...240 V 3 phases<br>LXM05BD10M2 at 200...240 V single phase<br>LXM05BD10M3X at 200...240 V 3 phases<br>LXM05CD10M2 at 200...240 V single phase<br>LXM05CD10M3X at 200...240 V 3 phases<br>LXM15LU60N4 at 400 V 3 phases<br>LXM15LU60N4 at 480 V 3 phases |
| Shaft end                   | Keyed                                                                                                                                                                                                                                                                                                                   |
| IP degree of protection     | IP50                                                                                                                                                                                                                                                                                                                    |
| Encoder type                | Absolute multiturn SinCos Hiperface                                                                                                                                                                                                                                                                                     |
| Encoder feedback resolution | 131072 points/turn x 4096 turns                                                                                                                                                                                                                                                                                         |
| Holding brake               | Without                                                                                                                                                                                                                                                                                                                 |
| Mounting support            | International standard flange                                                                                                                                                                                                                                                                                           |
| Electrical connection       | Rotatable right-angled connectors                                                                                                                                                                                                                                                                                       |
| Number of poles             | 6                                                                                                                                                                                                                                                                                                                       |

## Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range compatibility                         | Lexium 05<br>Lexium 15                                                                                                                                                                                                                                                                                                                                                                                                  |
| Nominal torque                              | 1.1 N.m for LXM15LU60N4 at 400 V 3 phases<br>1.1 N.m for LXM15LU60N4 at 480 V 3 phases<br>1.2 N.m for LXM05AD10M2 at 200...240 V single phase<br>1.2 N.m for LXM05AD10M3X at 200...240 V 3 phases<br>1.2 N.m for LXM05BD10M2 at 200...240 V single phase<br>1.2 N.m for LXM05BD10M3X at 200...240 V 3 phases<br>1.2 N.m for LXM05CD10M2 at 200...240 V single phase<br>1.2 N.m for LXM05CD10M3X at 200...240 V 3 phases |
| Maximum current Irms                        | 3.4 A for LXM05CD10M3X<br>3.4 A for LXM05AD10M2<br>3.4 A for LXM05AD10M3X<br>3.4 A for LXM05BD10M2<br>3.4 A for LXM05BD10M3X<br>3.4 A for LXM05CD10M2<br>3.6 A for LXM15LU60N4                                                                                                                                                                                                                                          |
| Switching frequency                         | 4 kHz for LEX05                                                                                                                                                                                                                                                                                                                                                                                                         |
| Torque constant                             | 1.18 N.m/A rms at 120 °C<br>1.33 N.m/A rms at 120 °C                                                                                                                                                                                                                                                                                                                                                                    |
| Back electromagnetical force (emf) constant | 78 V rms/krpm at 120 °C<br>79 V rms/krpm at 120 °C                                                                                                                                                                                                                                                                                                                                                                      |
| Rotor inertia                               | 0.19 kg.cm <sup>2</sup> without brake                                                                                                                                                                                                                                                                                                                                                                                   |
| Stator resistance                           | 32 Ohm at 20 °C<br>38.4 Ohm at 20 °C                                                                                                                                                                                                                                                                                                                                                                                    |
| Stator inductance                           | 48 mH at 20 °C<br>92.2 mH at 20 °C                                                                                                                                                                                                                                                                                                                                                                                      |
| Stator electrical time constant             | 1.5 ms at 20 °C<br>2.4 ms at 20 °C                                                                                                                                                                                                                                                                                                                                                                                      |
| Maximum radial force Fr                     | 190 N at 8000 rpm<br>200 N at 7000 rpm<br>210 N at 6000 rpm<br>230 N at 5000 rpm<br>240 N at 4000 rpm<br>270 N at 3000 rpm<br>310 N at 2000 rpm<br>390 N at 1000 rpm                                                                                                                                                                                                                                                    |
| Maximum axial force Fa                      | 0.2 x Fr                                                                                                                                                                                                                                                                                                                                                                                                                |
| Product weight                              | 1.76 kg                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Environment

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|--------------------------|-----------|
| RoHS EUR conformity date | 0850      |
| RoHS EUR status          | Compliant |